

# RF Exposure Evaluation

Report No. : ESTRFC2102-001

FCC ID : 2AYAV-WS-STANDA2010

## Measuring Standard

KDB 680106 D01 RF Exposure Wireless Charging Apps v03

## Description of EUT

Product name : STAND:ON

Model name : WS-STANDA2010

Date of Test : 2021, 02, 02

Tested by	Engineer H.G. Lee	(Signature)
Reviewed by	Engineering Manager I.K. Hong	(Signature)
Test Items	Result (Pass / Fail)	Remark
Maximum Permissible Exposure	Pass	-
Abbreviation	Pass = Complied, Fail = Failed, N/A = not applicable	

## Declaration of Conformity:

The test results with all measurement uncertainty excluded are presented in accordance with regulation limits or requirements declared by manufacturers.

## Comments and Explanations:

None

### Test equipment List

Description	Manufacturer	Model	Cal. Due Date
Magnetic field meter	NARDA	ELT-400	24-Dec-21

### Requirements

According to the item 5 of KDB 680106 D03v01:

Induction wireless power transfer applications that meet all of the following requirements of KDB 680106 D01, Clause 5(b) is waived from PAG procedures.

(1) Power transfer frequency is less than 1 MHz.  
(conform)

(2) Output power from each primary coil is less than or equal to 15 watts.  
(conform)

(3) The transfer system includes only single primary and secondary coils. This includes charging systems that may have multiple primary coils and clients that are able to detect and allow coupling only between individual pairs of coils.  
(conform)

(4) Client device is placed directly in contact with the transmitter.  
(conform)

(5) Mobile exposure conditions only (portable exposure conditions are not covered by this exclusion).  
(conform)

(6) The aggregate H-field strengths at 15 cm surrounding the device and 20 cm above the top surface from all simultaneous transmitting coils are demonstrated to be less than 50% of the MPE limit.  
(conform)

# 1 Human Exposure Assessment

- 1.1 Maximum Permissible Exposure
  - 1.1.1 Limit of Maximum Permissible Exposure

Limits for Occupational / Controlled Exposure

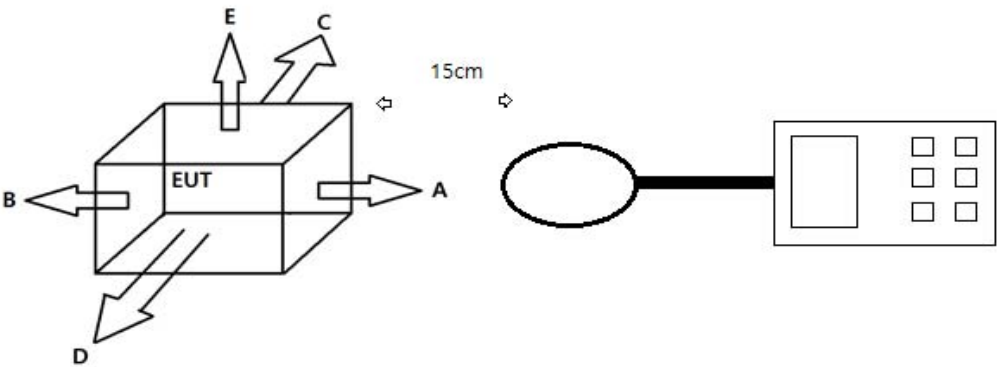
Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength(A/m)	Power Density (mW/cm <sup>2</sup> )	Average Time (minutes)
0.3 – 3.0	614	1.63	*(100)	6
3.0 – 30	1842/f	4.89/f	*(900/f <sup>2</sup> )	6
30 – 300	61.4	0.163	1.0	6
300 – 1500			F/300	6
1500 – 100,000			5	6

Limits for General Population / Uncontrolled Exposure

Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength(A/m)	Power Density (mW/cm <sup>2</sup> )	Average Time (minutes)
0.3 – 1.34	614	1.63	*(100)	30
1.34 – 30	824/f	2.19/f	*(180/f <sup>2</sup> )	30
30 – 300	27.5	0.073	0.2	30
300 – 1500	–	–	F/1500	30
1500 – 100,000	–	–	1.0	30

F = Frequency in MHz      \* = Plane-wave equivalent power density

## Test setup



## Test Procedure

- 1) The RF exposure test was performed in anechoic chamber.
- 2) The measurement probe was placed at test distance (15 cm from all sides and 20 cm from the top) which is between the edge of the charger and the geometric center of probe.
- 3) The highest emission level was recorded and compared with limit as soon as measurement of each points (A, B, C, D, E) were completed.
- 4) The EUT was measured according to the dictates of KDB 680106 D03v01.

## Test Result

E-Filed Strength at 15 cm from the edges surrounding the EUT

Test Position A	Test Position B	Test Position C	Test Position D	Test Position E	Limits Test (V/m)
2.4	2.52	2.34	2.45	–	614

E-Filed Strength at 20 cm from the Top

Test Position A	Test Position B	Test Position C	Test Position D	Test Position E	Limits Test (V/m)
–	–	–	–	2.48	614

H-Filed Strength at 15 cm from the edges surrounding the EUT

Test Position A	Test Position B	Test Position C	Test Position D	Test Position E	Limits Test (A/m)
0.079	0.081	0.074	0.072	–	1.63

H-Filed Strength at 20 cm from the Top

Test Position A	Test Position B	Test Position C	Test Position D	Test Position E	Limits Test (A/m)
–	–	–	–	0.054	1.63

## Test Set-up Photo

